

## PATENT ABSTRACTS OF JAPAN

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### (54) WATER DEPOSITION

#### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a method for decomposing water by a reaction of water with an halogen by using activated carbon as a decomposition catalyst and by feeding a hydrocarbon gas into the reaction system to prevent catalytic function of the activated carbon from degrading.

**SOLUTION:** This decomposition of water by a reaction of water with a halogen comprises using activated carbon as a catalyst, and supplying a hydrocarbon gas into the reaction system, preferably by bubbling the activated carbon with the hydrocarbon gas. In this decomposition, although different types of activated carbon may be used, especially preferable activated carbon has a basic surface-functional group, and also although, as an halogen, any one of fluorine, chlorine, bromine and iodine may be used, it is preferable to use chlorine or bromine from the viewpoint of the reaction control and reaction rate. Furthermore, as the hydrocarbon, for example, methane, ethane, propane, ethene, propene, etc., can be used.

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